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Peter B. Martine  
MARTINE & PENILLA, LLP  
710 Lakeway Drive, Suite 170  
Sunnyvale, CA 94085

EXAMINER
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THOMPSON, JAMES A

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/941,711

Applicant(s)

KUWATA ET AL.

Examiner

James A Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-68 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-68 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

2. US Patent 6,597,458 B1 listed on the Information Disclosure Statement (form PTO-1449), submitted 28 January 2005, has not been considered. Said patent is listed in the IDS as being granted to Inuiya. However, US Patent 6,597,458 B1 is not to Inuiya and does not substantively relate to the present application. Examiner notes that Applicant probably intended to list US Patent 6,597,468 B1, which is to Inuiya and does substantively relate to the present application. A corrected PTO-1449 is required for the proper consideration of the intended patent.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 5-36, 47-65 and 67 are rejected under 35 U.S.C. 102(b) as being anticipated by Shiota (US Patent 6,011,547).

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**Regarding claims 1, 18 and 26:** Shiota discloses an image data generating apparatus (figure 1 of Shiota) comprising an image data generating mechanism (figure 1(1) of Shiota) configured to generate image data (column 3, lines 58-61 of Shiota); an output process control information obtaining mechanism (figure 1(2) and column 3, line 66 to column 4, line 4 of Shiota) configured to obtain output process control information (figure 1(9,10) of Shiota) obtained by combining the operating characteristic (figure 1(9) of Shiota) of said image data generating apparatus (column 4, lines 5-12 and lines 18-24 of Shiota) with image processing characteristics (figure 1(10) of Shiota) associated with a predetermined output apparatus (figure 1(12) and column 5, lines 54-62 of Shiota); and an image file assembly mechanism (figure 1(7) of Shiota) configured to generate a process control data containing the output process control information (column 5, lines 31-35 and lines 57-59 of Shiota). The image file assembly mechanism is the specific portion of the embodied software that writes the image data (figure 1(8) of Shiota) along with the output process control information (figure 1(9,10) of Shiota) in a single file (figure 1(7) of Shiota), as clearly shown in figure 1 of Shiota.

Further regarding claims 18 and 26: The mechanisms of claim 1 provide the means of claim 18 and perform the steps of the method of claim 26.

**Regarding claims 2, 20 and 28:** Shiota discloses that said image file assembly mechanism is configured to include said process control data in an image file that contains said image data (figure 1(7-10) and column 5, lines 31-35 of Shiota).

**Regarding claim 7:** Shiota discloses that said process control data further comprises additional information that is

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correlated to said image data, said additional information including at least one of color space information, contrast information ( $\gamma$  property) (column 4, lines 7-9 of Shiota), color balance information (column 5, lines 12-18 of Shiota), sharpness information (sharp impression or soft impression) (column 4, lines 26-28 of Shiota), color correction information (column 4, lines 48-53 of Shiota), shadow point information, highlight point information, brightness correction information (column 4, lines 18-20 of Shiota), and highlight color information.

**Regarding claim 8:** Shiota discloses an output process control information generating mechanism configured to create the output process control information (figure 1(9) and column 5, lines 31-35 of Shiota). Since output process control information (figure 1(9) of Shiota) is listed as part of the overall information (column 5, lines 31-35 of Shiota), then some form of output process control information generating mechanism is inherent in the system taught by Shiota. The output process control information generating mechanism would specifically be a portion of the embodied software.

**Regarding claim 9:** Shiota discloses a storage mechanism that is configured to hold therein the output process control information (column 5, lines 31-35 of Shiota), wherein said output process control information obtaining mechanism is configured to obtain said output process control information from said storage mechanism (column 5, lines 40-44 of Shiota). The output process control information obtaining mechanism (figure 1(2) of Shiota) obtains the output process control information for use with the output device (column 5, lines 40-44 of Shiota) from a built-in memory or card memory (column 5,

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lines 31-35 of Shiota), said built-in memory or card memory being the storage mechanism.

**Regarding claim 10:** Shiota discloses a data transfer mechanism (figure 1(2→3) of Shiota) configured to transmit the image data and the process control data (column 5, lines 40-44 and lines 54-57 of Shiota). In order for the image data and process control data to be transferred to the output device, some form of data transfer mechanism is inherent. Otherwise, there is no means by which the output device will be able to obtain the image data and process control data.

**Regarding claims 12, 22, 30 and 34:** Shiota discloses an image data generating apparatus (figure 1 of Shiota) comprising an image data generating mechanism (figure 1(1) of Shiota) configured to generate image data of a subject (column 3, lines 58-61 of Shiota); a first image obtaining mechanism (figure 1(2 (portion)) of Shiota) configured to obtain first information for faithfully reproducing a color of the subject, the first information including reproduction characteristics of a predetermined output apparatus (column 5, lines 54-59 of Shiota), which is configured to provide a visual presentation of an image from said image data (column 5, lines 63-67 of Shiota); a second image obtaining mechanism (figure 1(2(portion)) of Shiota) configured to obtain second information for specifying an image quality adjustment process to be performed on said image data by said predetermined output apparatus, the second information including reproduction characteristics of the predetermined output apparatus (column 5, lines 44-50 of Shiota); and an image file assembly mechanism (figure 1(2 (portion)) of Shiota) configured to generate an image file containing the image data and at least one of the first

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information and the second information (column 5, lines 31-35 and lines 57-59 of Shiota). The image file assembly mechanism is the specific portion of the software embodied on the image server (figure 1(2) of Shiota) that writes the image data along with said first and second information (figure 1(9,10) of Shiota) in a single file (figure 1(7) of Shiota), as clearly shown in figure 1 of Shiota. The first and second image obtaining mechanisms are the corresponding portions of the software embodied on the image server (figure 1(2) of Shiota) that obtain said first and second information.

Further regarding claims 22, 30 and 34: The mechanisms of claim 12 provide the means of claim 22, perform the steps of the method of claim 30, and provide the propagated data signals of claim 34. In order for an apparatus as shown in figure 1 of Shiota to function, propagated data signals for each of the software elements and information elements are required. Otherwise, there can be no propagation of data from one portion of the apparatus to another, and not propagation of data within a portion of the apparatus.

**Regarding claims 13, 23 and 31:** Shiota discloses that said image file assembly mechanism is configured to include the image data, the first information, and the second information in said image file (figure 1(7) and column 5, lines 31-35 of Shiota).

**Regarding claims 11 and 17:** Shiota discloses that the image generating apparatus is at least one of a digital still camera (column 3, lines 58-61 of Shiota), a digital video camera, and a scanning device.

**Regarding claim 19:** Shiota discloses that said means for generating image data, means for obtaining output control information, and means for generating a process control data

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each being a computer program product having computer readable instructions (column 6, lines 3-9 of Shiota).

**Regarding claim 27:** Shiota discloses that said steps of generating image data, obtaining output process control information, and generating a process control data are computer-implemented process steps (column 6, lines 3-9 of Shiota).

**Regarding claims 52 and 57:** Shiota discloses an apparatus (figure 1 of Shiota) comprising a processor (column 6, lines 3-9 of Shiota); means (figure 1(2) of Shiota) for retrieving an image file (figure 1(7) of Shiota) and providing the image file to the processor (column 5, lines 41-44 of Shiota), said image file including the image data (figure 1(8) of Shiota), and a process control data (figure 1(9,10) of Shiota) containing output process control information obtained by combining operating characteristics of an image data generating apparatus (figure 1(9) of Shiota) and a predetermined output apparatus (figure 1(10) of Shiota) (column 5, lines 54-59 of Shiota), which is configured to provide a visual presentation of an image from said image data (column 5, lines 63-67 of Shiota), wherein said processor includes means for processing said image data using the image data and the output process control information (column 6, lines 3-9 of Shiota).

Further regarding claim 57: The means of the apparatus of claim 52 perform the steps of the method of claim 57.

**Regarding claims 53 and 58:** Shiota discloses that the image file (figure 1(7) of Shiota) includes said process control data (figure 1(9,10) of Shiota) and said image data (figure 1(8) of Shiota) in a single file (column 5, lines 54-59 of Shiota).

**Regarding claims 5 and 59:** Shiota discloses that the output process control information contains information for



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controlling image processing of the image data at the predetermined output apparatus (column 5, lines 44-53 of Shiota).

**Regarding claims 6, 21, 29, 54 and 60:** Shiota discloses that the output process control information includes gamma correction information (column 4, lines 5-10 of Shiota).

**Regarding claims 47 and 55:** Shiota discloses an apparatus (figure 1 of Shiota) comprising a processor (column 6, lines 3-9 of Shiota); a data retrieval mechanism (figure 1(2) of Shiota) configured to retrieve the image file (figure 1(7) of Shiota) and provide the image file to the processor (column 5, lines 40-44 of Shiota), said image file including first information for faithfully reproducing a color of the subject, the first information including reproduction characteristics of a predetermined output apparatus (column 5, lines 54-59 of Shiota), which is configured to provide a visual presentation of an image from said image data (column 5, lines 63-67 of Shiota); second information for specifying an image quality adjustment process to be performed on said image data by said predetermined output apparatus, the second information including reproduction characteristics of the predetermined output apparatus (column 5, lines 44-50 of Shiota); wherein said processor is configured to implement a first reproduction mechanism configured to perform image processing on said image data with said first information to faithfully reproduce a color of the subject (column 5, lines 54-57 of Shiota), and a second reproduction mechanism configured to perform a reproduction process specified for said image data based on said second information (column 5, lines 57-61 of Shiota); and an image data output mechanism (figure 1 (12) of Shiota) configured to output the image data after said image

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data has been processed by said first reproduction and said second reproduction mechanisms (column 5, lines 44-50 of Shiota).

Further regarding claim 55: The mechanisms of the apparatus of claim 47 provide the means of the apparatus of claim 55.

**Regarding claims 14, 24, 32, 35, 48 and 56:** Shiota discloses that said first information includes at least one of gamma correction information (column 4, lines 5-9 of Shiota), color space information (column 4, lines 46-53 of Shiota), and negative image data value information.

**Regarding claims 15 and 49:** Shiota discloses that the second information includes at least one of an image correction characteristic associated with generating a print data from an image data (column 5, lines 54-61 of Shiota).

**Regarding claims 16, 25, 33, 36 and 50:** Shiota discloses that said second information includes at least one of contrast information ( $\gamma$  property) (column 4, lines 7-9 of Shiota), color balance information (column 5, lines 12-18 of Shiota), sharpness information (sharp impression or soft impression) (column 4, lines 26-28 of Shiota), stored color correction information (column 4, lines 48-53 of Shiota), shadow point information, highlight point information, saturation information, and brightness correction information (column 4, lines 18-20 of Shiota).

**Regarding claim 51:** Shiota discloses that said predetermined output apparatus is a printer (figure 1(12) and column 5, lines 44-49 of Shiota).

**Regarding claim 61:** Shiota discloses an image segment (figure 1(7) of Shiota) containing the image data to be

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processed (figure 1(8) and column 5, lines 31-35 of Shiota); and an image processing control segment (figure 1(9,10) of Shiota) containing the image processing control data for controlling the output apparatus to perform image processing on said image data using the image data and the image processing control data (column 5, lines 54-61 of Shiota), and wherein the image processing control data includes output process control information (column 5, lines 54-59 of Shiota), which is configured to provide a visual presentation of an image from said image data (column 5, lines 63-67 of Shiota).

**Regarding claim 62:** Shiota discloses a computer program product (column 6, lines 3-9 of Shiota) comprising a computer storage medium (column 5, lines 31-34 of Shiota); a computer program code stored in the computer storage medium for implementing an image processing on the computer (column 6, lines 3-9 of Shiota), the computer program code having a first computer code configured to retrieve image data (figure 1(7) and column 5, lines 41-44 of Shiota) and process control data (figure 1(9,10) of Shiota) associated with the image data (column 5, lines 54-59 of Shiota), wherein the process control data contains output process control information obtained by combining an operating characteristic of an image data generating apparatus (column 3, line 66 to column 4, line 4 of Shiota) and a predetermined output apparatus (column 5, lines 54-62 of Shiota), which is configured to provide a visual representation of an image from said image data (column 5, lines 63-67 of Shiota), and a second computer code configured to perform image processing on the image data using the image data and the output process control information, if the process control data is retrieved (column 5, lines 54-61 of Shiota).

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**Regarding claim 63:** Shiota discloses a third computer code configured to perform image data processing on the image data using the predetermined process control data, if the process control data is not retrieved (column 5, lines 54-59 of Shiota), wherein the predetermined process control data is configured to general purpose image processing (column 4, lines 54-59 of Shiota). If no correction processing is designated (column 4, lines 54-59 of Shiota), then clearly all that is left to be performed is general purpose image processing.

**Regarding claims 64 and 67:** Shiota discloses an image data processing system (figure 1 of Shiota) comprising an image data generating device (figure 1(1) of Shiota) configured to generate image data (column 3, lines 58-61 of Shiota); an output process control information obtaining mechanism (figure 1(2(portion)) and column 3, line 66 to column 4, line 4 of Shiota) configured to obtain output process control information (figure 1(9,10) of Shiota) obtained by combining the characteristic (figure 1(9) of Shiota) of said image data generating device (column 4, lines 5-12 and lines 18-24 of Shiota) with image processing characteristics (figure 1(10) of Shiota) associated with a predetermined output device (figure 1(12) and column 5, lines 54-62 of Shiota), which is configured to provide a visual representation of an image from said image data (column 5, lines 63-67 of Shiota); an image file assembly mechanism (figure 1(2(portion) of Shiota) configured to generate an image file (figure 1(7) of Shiota) that includes the image data (figure 1(8) of Shiota) and the process control data (figure 1(9,10) of Shiota) which contains the output process control information (column 5, lines 31-35 and lines 54-59 of Shiota); a processor (column 6, lines 3-9 of Shiota); and a data retrieval mechanism

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(figure 1(2(portion)) of Shiota) configured to retrieve said image file and provide the image file to the processor (column 5, lines 40-44 of Shiota), wherein said processor is configured to perform image processing on said image data (column 6, lines 3-9 of Shiota) using the image data and the output process control information (column 5, lines 54-59 of Shiota). The image file assembly mechanism is the specific portion of the software embodied on the image server (figure 1(2) of Shiota) that writes the image data along with said first and second information (figure 1(9,10) of Shiota) in a single file (figure 1(7) of Shiota), as clearly shown in figure 1 of Shiota. The output process control information obtaining mechanism and the data retrieval mechanism are the corresponding portions of the software embodied on the image server (figure 1(2) of Shiota) that perform the functions of said output process control information obtaining mechanism and said data retrieval mechanism.

Further regarding claim 67: Each and every limitation of the system of claim 67 is embodied in the system of claim 64. The mechanisms of claim 64 provide the means of claim 67.

**Regarding claim 65:** Shiota discloses that all of the image processing is performed on a personal computer (column 6, lines 3-9 of Shiota). Therefore, Shiota further discloses a personal computer that contains said processor and said data retrieval mechanism.

**Claim Rejections - 35 USC § 103**

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-4 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiota (US Patent 6,011,547) in view of Liu (US Patent 6,523,046 B2).

**Regarding claim 3:** Shiota does not disclose expressly that said output file is an Exif file.

Liu discloses using an Exif file to store images (figure 2 (212("EXIF"))) and column 9, lines 58-67 of Liu).

Shiota and Liu are combinable because they are from similar problem solving areas, namely storing and using digital image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use an Exif file format as the output file format. The suggestion for doing so would have been that an Exif file is simply one of many possible formats that one of ordinary skill in the art could select as an output file format (column 8, lines 4-9 of Liu). Therefore, it would have been obvious to combine Liu with Shiota to obtain the invention as specified in claim 3.

**Further regarding claim 4:** Liu discloses that the process control data is a Makernote portion of the Exif file (column 10, lines 17-21 of Liu).

**Regarding claim 37:** Shiota discloses that said image data and said process control data is included as part of a single file that is embodied in said propagated data signal (figure 1(7-10) and column 5, lines 31-35 of Shiota).

Shiota does not disclose expressly that said file is specifically in the Exif file format.

Liu discloses using an Exif file to store images (figure 2 (212("EXIF")) and column 9, lines 58-67 of Liu).

Shiota and Liu are combinable because they are from similar problem solving areas, namely storing and using digital image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use an Exif file format as the file format for the single file containing the image data and process data. The suggestion for doing so would have been that an Exif file is simply one of many possible formats that one of ordinary skill in the art could select as an output file format (column 8, lines 4-9 of Liu). Therefore, it would have been obvious to combine Liu with Shiota to obtain the invention as specified in claim 37.

7. Claims 38-42, 44-46, 66 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiota (US Patent 6,011,547) in view of Kondo (US Patent 6,281,992 B1).

**Regarding claim 38:** Shiota discloses an apparatus (figure 1 of Shiota) comprising a processor (column 6, lines 3-9 of Shiota); a data retrieval mechanism (figure 1(2) and column 3, line 66 to column 4, line 4 of Shiota) configured to retrieve the image data (figure 1(8) of Shiota) and a process control data (figure 1(9,10) of Shiota) associated with the image data (column 5, lines 31-35 of Shiota), wherein the process control

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data contains output process control information obtained by combining an operating characteristic of an image data generating apparatus (figure 1(9) of Shiota) and a predetermined output apparatus (figure 1(10) of Shiota) (column 5, lines 54-59 of Shiota), which is configured to provide a visual presentation of an image from said image data (column 5, lines 63-67 of Shiota); a first data provide mechanism (figure 1(6) of Shiota) configured to provide the image data (figure 1(8) of Shiota) and the process control data for the image generating apparatus (figure 1(9) of Shiota) (column 5, lines 29-35 of Shiota); and second data provide mechanism (figure 1(11) of Shiota) configured to provide the process control data for the predetermined output apparatus (figure 1(10) and column 5, lines 54-59 of Shiota); and wherein said processing is configured to perform image processing on said image data using the image data and the output process control information (column 6, lines 3-9 of Shiota).

Shiota does not disclose expressly that said first data provide mechanism and said second data provide mechanism are a single mechanism.

Kondo discloses a single data provide mechanism (figure 1(14) of Kondo) that provides process control data (column 4, lines 31-41 of Kondo) based on the image generating apparatus (figure 1(12) of Kondo) and the predetermined output apparatus (figure 1(16) of Kondo) (column 4, lines 53-56 of Kondo).

Shiota and Kondo are combinable because they are from the same field of endeavor, namely digital image data processing and reproduction. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to provide all of the process control data from a single device which



correlates the image generating apparatus and the predetermined output apparatus, as taught by Kondo. The motivation for doing so would have been to provide for stability in the quality of reproduced images given a plurality of different input and output devices (column 2, lines 26-36 of Kondo). Therefore, it would have been obvious to combine Kondo with Shiota to obtain the invention as specified in claim 38.

**Regarding claim 39:** Shiota discloses that, if the process control data is not retrieved, the data provide mechanism provides the image data and a predetermined process control data to the processor (column 5, lines 54-59 of Shiota), wherein the predetermined process control data is configured to general purpose image processing (column 4, lines 54-59 of Shiota). If no correction processing is designated (column 4, lines 54-59 of Shiota), then clearly all that is left to be performed is general purpose image processing.

**Regarding claim 40:** Shiota discloses that said processor is hosted in a computer (column 6, lines 3-5 of Shiota).

**Regarding claim 41:** Shiota discloses that said predetermined output apparatus is a printer (figure 1(12) and column 5, lines 44-49 of Shiota).

**Regarding claim 42:** Shiota discloses that the image file (figure 1(7) of Shiota) includes said process control data (figure 1(9,10) of Shiota) and said image data (figure 1(8) of Shiota) in a single file (column 5, lines 54-59 of Shiota).

**Regarding claim 44:** Shiota discloses that the output process control information contains information for controlling image processing of the image data at the predetermined output apparatus (column 5, lines 44-53 of Shiota).

**Regarding claim 45:** Shiota discloses that the output process control information includes gamma correction information (column 4, lines 5-10 of Shiota).

**Regarding claim 46:** Shiota discloses that said process control data further comprises additional information that is correlated to said image data, said additional information including at least one of color space information, contrast information ( $\gamma$  property) (column 4, lines 7-9 of Shiota), color balance information (column 5, lines 12-18 of Shiota), sharpness information (sharp impression or soft impression) (column 4, lines 26-28 of Shiota), color correction information (column 4, lines 48-53 of Shiota), shadow point information, highlight point information, brightness correction information (column 4, lines 18-20 of Shiota), and highlight color information.

**Regarding claims 66 and 68:** Shiota discloses an image data processing system (figure 1 of Shiota) comprising an image generating apparatus (figure 1(1) of Shiota) including an image data generating mechanism (figure 1(1) of Shiota) configured to generate image data of a subject (column 3, lines 58-60 of Shiota) and store said image data in an image file (column 5, lines 31-35 of Shiota).

Shiota further discloses a first image obtaining mechanism (figure 1(2(portion)) of Shiota) configured to obtain first information for faithfully reproducing a color of the subject, the first information including reproduction characteristics of a predetermined output apparatus (column 5, lines 54-59 of Shiota), which is configured to provide a visual presentation of an image from said image data (column 5, lines 63-67 of Shiota); a second image obtaining mechanism (figure 1(2(portion)) of Shiota) configured to obtain second information for specifying

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an image quality adjustment process to be performed on said image data by said predetermined output apparatus, the second information including reproduction characteristics of the predetermined output apparatus (column 5, lines 44-50 of Shiota), said image file including said first information and said second information (column 5, lines 31-35 and lines 57-59 of Shiota).

Shiota further discloses an image processing apparatus (figure 1(2) of Shiota) including a processor (column 6, lines 3-9 of Shiota); a data retrieval mechanism (figure 1(2) of Shiota) configured to retrieve said image file (figure 1(7) of Shiota) and provide said image file to the processor (column 5, lines 40-44 of Shiota), wherein said processor is configured to implement a first reproduction mechanism configured to perform image processing on said image data with said first information to faithfully reproduce a color of the subject (column 5, lines 54-57 of Shiota), and a second reproduction mechanism configured to perform a reproduction process specified for said image data based on said second information (column 5, lines 57-61 of Shiota); and an image data output mechanism (figure 1(12) of Shiota) configured to output the image data after said image data has been processed by said first reproduction and said second reproduction mechanisms (column 5, lines 44-50 of Shiota).

Shiota discloses that said image data generating mechanism contains a digital processor (figure 1(5) and column 3, lines 58-61 of Shiota). However, Shiota does not disclose expressly that said first image obtaining mechanism and said second image obtaining mechanism are included in said image generating apparatus.

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Kondo discloses an image processing unit (figure 1(14) of Kondo) which is used to obtain information for faithfully reproducing a color of a subject and information for specifying image quality adjustment, including reproduction characteristics of a predetermined output apparatus (column 4, lines 31-42 of Kondo).

Shiota and Kondo are combinable because they are from the same field of endeavor, namely digital image data processing and reproduction. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a single processor to obtain the information for faithfully reproducing a color of a subject and the information for specifying image quality adjustment, including reproduction characteristics of a predetermined output apparatus, on a single processor, as taught by Kondo, said processor being the processor of the image data generation mechanism taught by Shiota. The processor would then only contain the data for one input device (figure 1(18a) of Kondo), namely itself, and a plurality of possible output devices (figure 1(20a) of Kondo). The motivation for doing so would have been to provide for stability in the quality of reproduced images given a plurality of different output devices (column 2, lines 26-36 of Kondo) by supplying the profiles of said output devices on said image data generating mechanism taught by Shiota. Therefore, it would have been obvious to combine Kondo with Shiota to obtain the invention as specified in claims 66 and 68.

Further regarding claim 68: Each and every limitation of the system of claim 68 is embodied in the system of claim 66. The mechanisms of claim 66 provide the means of claim 68.

8. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shiota (US Patent 6,011,547) in view of Kondo (US Patent 6,281,992 B1) and Liu (US Patent 6,523,046 B2).

**Regarding claim 43:** Shiota discloses that the process control data is stored in a specific portion (figure 1(9,10) of Shiota) of the image file (figure 1(7) of Shiota) (column 5, lines 31-35 and lines 57-59 of Shiota), and said data retrieval mechanism retrieves said specific portion to obtain the process control data (column 5, lines 54-59 of Shiota).

Shiota in view of Kondo does not disclose expressly that said specific portion is a Makernote portion of an Exif file.

Liu discloses using a Makernote portion of an Exif file to store property items (column 10, lines 17-21 of Liu).

Shiota and Liu are combinable because they are from similar problem solving areas, namely storing and using digital image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Makernote portion of an Exif file format to store property items, as taught by Liu, said property items being the process data taught by Shiota. The suggestion for doing so would have been that an Exif file, along with the corresponding Makernote portion, is simply one of many possible formats that one of ordinary skill in the art could select as an output file format (column 8, lines 4-9 of Liu). Therefore, it would have been obvious to combine Liu with Shiota in view of Kondo to obtain the invention as specified in claim 43.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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James A. Thompson  
Examiner  
Art Unit 2624

JAT  
08 April 2005



THOMAS D.  
~~THOMAS D.~~ LEE  
EXAMINER